

Before the
FEDERAL COMMUNICATIONS COMMISSION

Washington, DC 20554

In the Matter of)
ET Docket No. 04-186 (TV White Spaces))

August 6, 2012

SPECTRUM BRIDGE INC. PETITION FOR WAIVER

Pursuant to 47 C.F.R. § 1.3.¹, Spectrum Bridge respectfully requests that the Federal Communications Commission (FCC) waive certain requirements for fixed TV Band devices that operate at power levels at or below the maximum permitted power level for personal/portable devices. As described in detail below Spectrum Bridge believes that such a waiver will serve the public interest by increasing the potential opportunity for innovative use of TV White Space while satisfying the requirement to provide equal or better protection for incumbent operations. The waiver is predicated on the creation of a new class of device, a low power fixed device, that will be managed accordingly by the TV Band Database.

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¹ See ACS Order, 26 FCC Rcd at 14637 ¶ 188 (citing 47 C.F.R. § 1.3). Section 1.3 of the Commission's rules

FCC rules allow for TVBD (Fixed) device operation up to 36 dBm EIRP, provided they meet certain requirements including location identification and device registration requirements. More specifically geographic coordinates of a fixed TVBD shall be determined to an accuracy of +/- 50 meters by either an incorporated geo-location capability or a professional installer and this information shall be stored in the TVBD either by means of the device's incorporated geo-location capability or through the services of a professional installer.

Spectrum Bridge has encountered a number of applications where fixed TVBDs could be deployed and offer useful service at low power, $\leq 40\text{mW}$. A specific example is the video distribution solution developed by MeldTech. The solution incorporates a rack-mounted unit that requires professional installation and is capable of streaming video content to television receiver devices using 8-VSB modulation. The geographic location of the device is programmed into the device before it can operate.

Fixed devices are assumed to operate at high power and, as such are precluded from operating in adjacent channels, whereas low power personal portable device are permitted to operate in adjacent channels.

Spectrum Bridge requests a waiver of the TV White Space rules to allow the operation of fixed devices in adjacent channels, i.e. the same channels afforded to a low power (40 mW) personal/portable device) subject to certain conditions². The fixed devices described by this waiver would comply with all current requirements for fixed devices, except:

§ 15.709 General technical requirements.

(a) Power limits for TVBDs.

(1) For fixed TVBDs, the maximum power delivered to the transmitting antenna shall not exceed one watt; this maximum applies regardless of the number of TV channels on which the device operates. The power delivered to the transmitting antenna is the maximum conducted output power reduced by the signal loss experienced in the cable used to connect the transmitter to the transmit antenna. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. **Fixed TVBDs that operate on available channels that do not meet the adjacent channel separation requirements of § 15.712(a) are limited to a maximum EIRP of 40 milliwatts (16 dBm).**

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² The fixed devices described in this waiver will be:

- professionally installed,
 - require a wired internet connection to attain a channel map,
- thus, they will not move and will behave more consistently than a tethered personal portable device.

(5) The power spectral density conducted from the TVBD to the antenna shall not be greater than the following values when measured in any 100 kHz band during any time interval of continuous transmission:

(ii) Fixed/Personal/portable devices operating adjacent to occupied TV channels: -1.4 dBm.

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§ 15.711 Interference avoidance methods.

(d) Identifying information. Fixed TVBDs shall transmit identifying information, except when operating at less than an EIRP of 40 mW. The identification signal must conform to a standard established by a recognized industry standards setting organization. The identification signal shall carry sufficient information to identify the device and its geographic coordinates.

The following additional conditions will be applied:

§ 15.709 General technical requirements.

(c) Emission limits for TVBDs.

(ii) Personal/portable and fixed devices operating at 40 mW (in channels adjacent to occupied TV channels) devices: -56.8 dBm EIRP.